



# SMALL WARS

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## JOURNAL

## Clausewitz, Center of Gravity, and the Confusion of a Generation of Planners

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### Clausewitz, Center of Gravity, and the Confusion of a Generation of Planners

Robert Dixon

There are likely few strategic concepts that instigate arguments more than Clausewitz's Center of Gravity (COG). The 19th century Prussian theorist introduced the topic in his famous treatise, *Vom Krieg*, calling the *Schwerpunkt* the point where all force must be directed.<sup>[1]</sup> But just what is *Schwerpunkt*? That depends greatly on who answers. German scholars' views in the 1800s differ significantly from what modern US doctrine writers and strategists refer to as the COG. Indeed, few "experts" seem to agree on a truly useful definition of the term.<sup>[2]</sup> While arguments over theory among strategists may seem a bit esoteric, the outcome of the arguments is of paramount importance: the theory of centers of gravity leads to a theory of victory for each conflict, and having a faulty theory leads to mission failure and unnecessary loss of life. The doctrinal term "Center of Gravity" is an artifact of a bygone era, and has done more damage than good in the modern era. It is past time for US doctrine to omit the term from its lexicon.

COG first entered US Joint doctrine in the 1993 Joint Publication 3-0, *Doctrine for Joint Operations* <sup>[3]</sup> calling the COG the "foundation of capability" and quoting the Howard and Paret 1973 translation of Clausewitz's *On War* "the hub of all power and movement, on which everything depends... the point at which all our energies should be directed." <sup>[4]</sup> While the Joint definition changed slightly with every iteration of doctrine, the current version (as of August 2014) defines COG as "The source of power that provides moral or physical strength, freedom of action, or will to act. Also called COG. See also decisive point."<sup>[5]</sup> The governing manual referred to in JP 1-02 is the 2011 Joint Publication 5-0 *Joint Operation Planning* which defines COG as "a source of power..."<sup>[6]</sup> The difference is subtle: "the hub of all power" versus "a source of power". The distinction here is important: as Clausewitz described the *Schwerpunkt* as the point where all force must be directed, a seemingly singular point of focus. Current US joint doctrine has watered down the term, allowing multiple COGs and offering little help in focusing military efforts. Indeed, joint doctrine now allows for separate COGs at the tactical, operational and strategic levels and multiple COGs throughout each phase of the operation.<sup>[7]</sup> The defining example of COG analysis in the 2009 Joint Publication 2-01.3 *Joint Intelligence Preparation of the Operational Environment* shows the COG analysis for Operation RESTORE HOPE in Somalia outlining six separate parties each with 3-4 COGs.<sup>[8]</sup> While this level of detail is important to understanding the context of the operation, there is nothing central or gravitational about this kind of analysis, and the outcome does little to help the commander focus "all force" as Clausewitz intended.

But is finding a single focal point really important? Army doctrine departs from the Joint definition by using the definite article, and keeping the language from the 1993 Joint Publication. ADRP-3-0, *Unified Land Operations*

translates COG as “the hub of all power and movement, on which everything depends,” suggesting a singular point where land operations should focus its efforts instead of the multi-layered approach suggested in joint doctrine.[9] The Army’s translation may be closer Howard’s, but the inconsistency with Joint Doctrine is a source of friction within the joint community.

US Navy doctrine fits most closely with the Army, and defines COG as “the source of power...” for both friendly and enemy forces.[10] The Navy Planning Process then outlines a systematic method for determining the COG by first identifying strategic and operational objectives, critical factors (strengths and weaknesses), the COG, and then critical capabilities (crucial enablers for a COG). To actually identify the COG, though, Navy planners are instructed to evaluate each critical strength and then “specifically ask the question: Does this critical strength accomplish the objective? If the answer is that it does not accomplish the objective but only assists in accomplishing the objective, it is probably a critical capability or critical requirement but not the COG.”[11]

Both the Air Force and USMC use the JP 5-0 definition and apply the “Strange Model” (sometimes referred to as CG-CC-CR-CV) for determining enemy vulnerabilities, and both stress that analysis should be iterative as the COG may change during operations.[12] The Strange Model was also adopted in JP 5-0 as a means of identifying critical capabilities, critical requirements, and critical vulnerabilities associated with each COG. The model is useful in identifying important characteristics associated with COGs, but does not actually help planners or commanders actually correctly identify a COG. Moreover, since the model allows for any number of dynamic agents within a system, the approach does not focus on elements that could be decisive. In applying the model, commanders and planners may be better informed about the enemy system but are no closer to identifying anything central that could help focus resources and effort.[13]

Ironically, the Joint COG Model example in Air Force doctrine outlines the logic behind the bombing of ball bearing plants in Germany in World War II, identifying the ball bearings, petroleum and rail yards as critical vulnerabilities that lead to the German COG, its industrial base.[14] The irony lies in the fact that while the Allied air forces successfully bombed these plants, it had no discernable impact on the outcome of the war. Had the ball bearing factories actually been a COG, the destruction of these (according to the logic of COG) should have brought down the German war machine. It did not.[15]

All of the services claim to have a process for identifying COGs, but none of the doctrine actually tells planners how to find it. Each service approaches COG analysis methodically, but nearly always ends in a tautology: critical capabilities lead to COGs, which are important because of their capabilities. ADRP 3-0, for example, calls COG a “vital analytical tool for planning operations. It provides a focal point, identifying sources of strength and weakness.”[16] The manual later admits that finding the COG is mostly an art. Indeed, COG analysis is clearly not as scientific as the term “center of gravity” might suggest.

The outcome of the inter-service differences in how to identify a COG often leads to disagreements over what the COG for a particular operation is. Different methodologies produce different answers, often at different echelons. Clearly, the Prussian could not have intended such confusion: he instructs his reader to “dare all to win all” against the COG, clearly indicating that he was looking for a single point on which to focus all force.

Yet the lack of focus caused by inter-service translational issues is not the worst outcome of the use of COG. Actually narrowing the focus to a single COG but getting it wrong is much worse. Joseph Strange, designer of the “Strange Model” says the Iraqi Republican Guard was the COG in '91 and in '03. Yet in a 2004 article Strange says that with the benefit of hindsight the COG “was *more likely* the asymmetric

Fedayeen forces..." (emphasis added).[17] Even with the benefit of hindsight, the Strange model can only produce a "more likely" assertion about what the COG was in 2003. It begs the question as to whether the model could be used to guess it correctly in foresight?

The fixation on the Republican Guard (operational COG) and Baghdad (the strategic COG) led leaders to ignore the emergence of something that did not fit their template. This is the true danger of the term: while looking for Clausewitz's focal point (something central, the source of all power, the hub, etc.) leaders forget that they are not observing a static system. Dynamic systems do not have centers, and if they did it would constantly move.

Largely due to the lack of clarity or a proven method of determining a COG, there are no relevant historical examples of the use of the term that has led to decisive victory. There are, however, plenty of examples where the use of the term has led commanders astray. Focusing combat power almost exclusively on ball bearing factories or the capital at the expense of other targets illustrates the danger of misapplication or misunderstanding of COGs.

One critic of US performance in Iraq and Afghanistan has asserted that there is a "stunning inability of modern American generals... to identify and defeat the enemy center of gravity." [18] Despite the impressive intellectual talent that has served over the past decade in these theaters, no truly useful conclusions about COGs have emerged. Perhaps, then, it is time to consider that there is something wrong with the concept itself. Perhaps the modern understanding of social systems and warfare has evolved to a point where the US military can abandon a concept whose only proof of existence is a 19<sup>th</sup> century theorist writing about war based on his observations of Napoleonic warfare.

*On War* reveals that Clausewitz probably had a sophisticated view of systems: his understanding of cohesion and its effects on system dynamics, the gestalt view of systems, and the problem with causal linkages that are separated in time and space all point to an understanding of complex systems that was not popularly understood until Ludwig von Bertalanffy published his General Systems Theory in 1946.[19] Perhaps Clausewitz only lacked the vocabulary and experience necessary to produce a theory that would be relevant today.[20]

As Clausewitz used Newtonian physics to describe the focal point for warfare, some modern theorists have begun to apply modern science to social constructs.[21] Applying complexity and systems thinking to complex, ill-structured problems, theorists can describe and investigate systems in ways Clausewitz could not. Applying the language of quantum mechanics, for example, would enable military theorists to explore the Clausewitzian concept of *cohesion* in terms of "energetic relationships and patterns of interaction" that determine system structure.[22] Since, as Clausewitz stated, "the effect produced on a center of gravity is determined and limited by the cohesion of the parts," the energy that holds the system together is equivalent to the "gravity" of that system.[23] As systems are dynamic, it would make little sense to call it a "center" of gravity as it would constantly move and change shape as the system evolves and operates in the real world. Investigating the nature and source of the energy that holds systems together would reveal far more about the nature and logic of the system than any COG analysis could.

Just as the language of science has evolved from the mechanistic, Newtonian roots of the 19<sup>th</sup> century, it is far past time for the military language and concepts to enter the age of quantum physics and systems theory. As science begins to describe the world in ways that reveal and rationalize its complexity, so should military doctrine.

## End Notes

[1] Carl von Clausewitz, *Vom Krieg* (Berlin: Vier Falfen Verlag, n.d.), 567. As cited in Christopher Fowler, “Center of Gravity – Still Relevant After All These Years”, USAWC Strategy Research Project, 2002. [http://www.iwar.org.uk/military/resources/cog/Fowler\\_C\\_W\\_02.pdf](http://www.iwar.org.uk/military/resources/cog/Fowler_C_W_02.pdf).

[2] See, for example, *Moltke on the Art of War: Selected Writings*, edited by Daniel J. Hughes. (Presidio Press, 1993), 78 which indicates that Schwerpunkt is the location of the middle of his unit. Also see Antulio Echevarria, *Clausewitz and Contemporary War*, (Oxford University Press Dec 2007), where Echevarria states that “The German text reveals that Clausewitz never used the word 'source' (Quelle) when describing the concept; nor did he equate the term center of gravity to 'strength' or 'a source of strength'.”

[3] Joint Publication 3-0, *Doctrine for Joint Operations*. September 1993.  
[http://www.dod.mil/pubs/foi/joint\\_staff/jointStaff\\_jointOperations/583.pdf](http://www.dod.mil/pubs/foi/joint_staff/jointStaff_jointOperations/583.pdf).

[4] Carl von Clausewitz, *On War*, ed. And trans. Michael Howard and Peter Paret (Princeton: Princeton University Press 1976).

[5] Joint Publication 1-02, *Department of Defense Dictionary of Military and Associated Terms*, (as Amended through) 15 August 2014.

[6] Joint Publication 5-0, *Joint Operation Planning*. 11 Aug 2011.

[7] Joint Publication 2-01.3 *Joint Intelligence Preparation of the Operational Environment*. 16 Jun 2009.

[8] Ibid, B-20.

[9] ADRP 3-0, *Unified Land Operations*. 16 May 2012.

[10] NWP 5-01, *Navy Planning*, December 2013.

[11] Ibid, Annex C.

[12] MCDP 1-0, Marine Corps Operations, 9 August 2011 and Air Force Doctrine Annex 3-0, *Operations and Planning*, Appendix A: *Center of Gravity Analysis Methods*, November 2012.

<https://doctrine.af.mil/download.jsp?filename=3-0-D30-Appendix-1-COG-Analysis.pdf> .

[13] Antulio Echavarria, “Center of Gravity Recommendations for Joint Doctrine”, *Joint Force Quarterly* 35: 10– 17 Oct 2004.

[14] AFD 3-0, Appendix A.

[15] World War II Database, *Schweinfurt Ball Bearing Factories*,  
[http://ww2db.com/facility/Schweinfurt\\_Ball\\_Bearing\\_Factories](http://ww2db.com/facility/Schweinfurt_Ball_Bearing_Factories) (accessed Oct 11, 2014).

[16] ADRP 3-0, 4-3.

[17] Joseph L. Strange , and Richard Iron, “Center of Gravity: What Clausewitz Really Meant.” *Joint Force Quarterly*, 35: 20– 27 Oct 2004.

[18] Stephen L. Melton, *The Clausewitz Delusion: How the American Army Screwed Up the Wars in Iraq and Afghanistan (A Way Forward)*, ( Zenith Press, 2009), 17.

[19] Donella H. Meadows, *Thinking in Systems: A Primer*, (Chelsea Green, VT: 2008).

[20] Paul Kan: "Clausewitz didn't have to fight the 'war on drugs'" Personal notes from USAWC Strategy Conference 8 Apr 2010, Carlisle. Panel 4: "Who Participates in War?"

[21] See, for example, Grant Martin, “Carl von Clausewitz, Meet Albert Einstein and Max Planck”, *Small Wars Journal*, Oct 3, 2012.

[22] T. Irene Sanders, *Strategic Thinking and the New Science: Planning in the Midst of Chaos, Complexity and Change*, (Free Press, NY: 1998), 62.

[23] *On War*, 486.

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